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ABSTRACT

A study was conducted at Cincinnati Technical College (CTC) to discover whether college athletes, particularly basketball players, performed as well as their non-athlete counterparts in terms of grade point average (GPA), credit hours completed, and graduation. A sample of 51 CTC basketball players was matched against a sample of 51 non-players with similar aptitude test scores, dates of entry, and programs of study. Study findings included the following: (1) the basketball players had an overall mean GPA of 1.98 while the matched non-players' GPA was 2.29; (2) the players earned an average of 54.3 credit hours, while the non-players averaged 57.6 hours; (3) the players enrolled for an average of 7.1 terms compared to the non-players who enrolled for an average of 9 terms; (4) 30 of the 51 players took at least one developmental education course compared to 25 of the matched males; and (5) 9 of the 51 basketball players had graduated compared to 7 of the 51 non-players. The study report includes a discussion of academic standards for college athletes established by various athletic associations and CTC. (EJV)

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COMPARISON OF ACADEMIC SUCCESS BETWEEN CTC BASKETBALL PLAYERS AND NONPLAYERS

by

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STATISTICS

by

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Comparison of Academic Success Between CTC Basketball Players and Nonplayers

Background

This study was requested by the Vice President for Academic Affairs at Cincinnati Technical College, as part of a study of basketball players and their academic success as compared to a matched group of nonplayers with similar characteristics.

In recent years there has been a great deal of discussion about the student athlete and his academic career. In four year institutions with strong athletic programs the policies governing eligibility of players and the fact that players were now eligible to play as freshmen regardless of their entering academic proficiency became key issues.

Stories of exploitation of athletes who were poor risks academically in the name of the sport proliferated in the mass media. It became difficult to pick up a newspaper or magazine without reading at least one article about an athlete who was "used" by the system and dismissed from the school at the end of his active eligibility. Athletics increasingly became a business which brought large sums of money and prestige to the institution. The athletes were being used and then dismissed. Schedules for games were expanded leaving little time for class participation and study which left little hope for academic success for the athlete.

In response colleges tried some plans to save the academic life of the athlete. Special study tables were established, relaxed course requirements during the season, which depending upon the sport could last through two quarters or semesters, and ultimately special counseling services to counsel the athlete into the "easier" majors or even in some cases into remedial or

developmental classes. Some players at four year institutions might spend up to two years in developmental education. Special tutors and teachers were hired to help the athlete during the season in some institutions. While these measures may be effective in some cases they still did not address the basis of the problem - many athletes were not prepared for college from high school and were never really given a chance to adjust to college life and the demands of the classroom.

In response to the criticisms the National College Athletic Association (NCAA) passed Rule 48 in an effort to set minimum standards for freshmen eligibility at Division 1A institutionis as of August 1986. Specifically the rule calls for (1) a high school grade point average of C, (2) a C average for 11 academic courses and (3) a combined score of 700 on the SAT or composite of 15 on the ACT. These standards determine only freshman eligibility. Students with lower scores may be recruited provided they sit out their freshman year. Transfer students did not have to meet these criteria for eligibility.

Because of the new ruling it was feared that many of the weaker students would opt to play in the National Junior College Athletic Association schools waiting until they could transfer to a four year school. The rules for junior college athletics are different from the NCAA Division 1A rules. NJCAA requirements are base line requirements to which all junior colleges must adhere. Many institutions have instituted more stringent rules for eligibility. Individual schools are able to determine academic excellence as it fits their campus. Students are encouraged to enroll in core curriculum courses and make progress toward a degree during their two year elibility. Another unique feature of the NJCAA rules is that they allow part time

students to play intercollegiate athletics. This was in response to the large part time student population at many Community, Junior and Technical colleges. (Killian, George; AACJC Journal, Oct./Nov. 1986)

John Hurley, Cincinnati Technical College basketball coach, listed the elibility requirements for playing at CTC. The requirements are that the student carry 12 credit hours during the terms of participation. Elibility for second year players state they must pass 24 credit hours with a 1.75 grade point average. To meet the 24 hour requirement second year players can choose their best 24 hours for consideration.

Purpose of the Study

The purpose of this study is to discover whether athletes do as well as their non athlete counterparts at CTC in terms of grade point average, credit hours completed, and graduation.

Hypothesis

1. Student athletes complete programs at CTC at the same rate as other students with similar characteristics.

2. Student athletes take more developmental education courses than their non athlete counterparts.

3. Student athletes tend to have lower GPAs than nonathletes.

4. Student athletes do not enroll for as many terms of school as nonathletes.

Description of the Experiment

A list of all CTC athletes from 1982 to the present was provided by John Hurley, basketball coach. The player's date of entry, combined verbal and numerical Differential Aptitude Test (DAT) score, program of study, gradepoint average, number of developmental courses taken, number of terms enrolled, credit hours earned and graduation data were collected from student records.

A random list of students with similar combined DAT scores, dates of entry, and program of study was collected. These students were then matched to a corresponding basketball player with the same basic credentials. The other factors such as grade point average, number of terms enrolled, number of developmental courses taken, graduation rates were then compared.

The sample consisted of fifty one basketball players and 51 nonplayers. In as much as possible an attempt was made whenever possible to select only male matches.

Results

Grade point averages were analyzed from various perspectives. The basketball players had an overall mean GPA of 1.98 whereas the matched nonplayers average GPA was 2.29. From a two sample test of means we conclude with greater than 95% certainty that the basketball players overall mean GPA is statistically lower than the matched males. The same conclusion results if we use the paired t-test. See figure 1.

Credit hours earned were analyzed - the basketball players averaged 54.3 credit hours and the mtched nonplayers 57.6 credit hours. However, statistical tests of these data do not suggest any significant differences in average credit hours earned. See figure 3.

The number of terms enrolled was analyzed. The basketball players averaged 7.1 terms and the matched nonplayers 9.0 terms. From a two sample test of means we conclude with 99% certainty that the basketball players overall mean number of terms enrolled is statistically lower than the matched non athletes. The same conclusion results if we use the paired t-test. See figure 4.

The number of developmental courses taken was analyzed. Thirty of the 51 basketball players took at least one DE course whereas 25 of the matched males did so. The chi-square test for detecting differences in proportions was used to test these data with a conclusion of no significant differences. See figure 5.

The graduation rate was also analyzed. Nine of the 51 basketball players have graduated whereas seven of the 51 nonplayers have done so. The chi square was used to test these data with a conclusion of no significant differences. See figure 6.

Conclusions

The first hypothesis was not shown to be statistically true. There appeared to be no significant difference in graduation rates between the two groups. Both groups exhibited a low graduation rate.

The second hypothesis was also not supported by the evidence since approximately the number of players and nonplayers took at least one DE course.

The average number of DE courses taken by the players was 2.06 and the average number of DE courses taken by the nonplayers was 1.52.

The third hypothesis was supported by the statistical evidence. There was significant evidence to show that basketball players do carry a lower GPA than their matched nonplayers.

The overall conclusion of this analysis is not perfectly clear cut. On one hand there is strong evidence that the basketball players do enroll in fewer terms and carry a lower grade point average. Mean credit hours earned for basketball players is only slightly less than the matched group. There was no strong significance to show that basketball players take more DE courses.

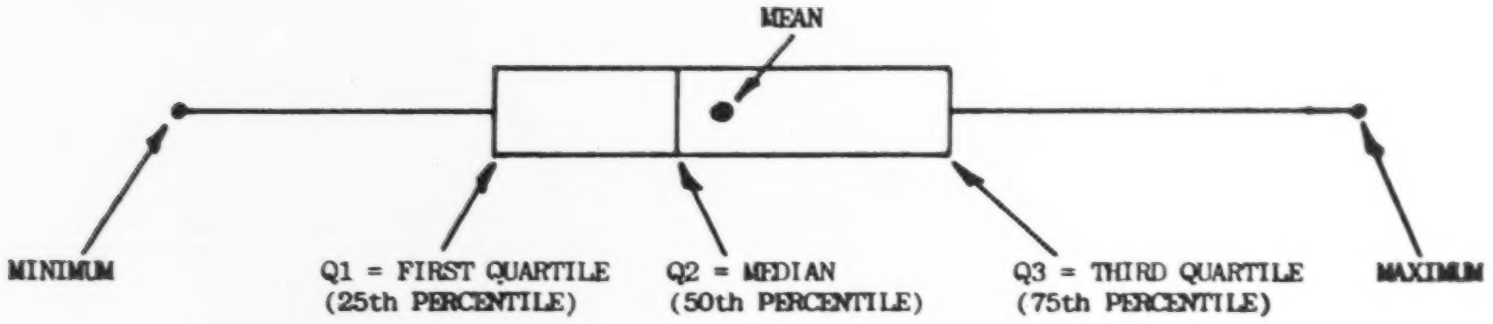
Implications for Further Study

1. A follow up study to see if the graduation rates improve over time with the two groups. Perhaps over a one year time the differences in graduation rates may become significant.

2. A follow up study to see if the number of terms enrolled continues to remain signficant.

3. A new study to look at what happens to the athlete and his paired nonathlete counterpart when they leave CTC.

FIG. 1 BOX PLOTS EXPLAINED



The box plot is an improved graphical representation for a distribution of scores (data). The minimum, maximum, and quartiles are displayed along with the mean value. Approximately 25% of the scores fall below the first quartile (Q1), 50% below the median (Q2), and 75% below the third quartile (Q3). Note that the "box" is constructed between Q1 and Q3 and therefore contains 50% of all the data. Most distributions are not perfectly symmetrical so the mean and median usually do not coincide exactly.

FIG. 2 GRADE POINT AVERAGE - BOX PLOTS

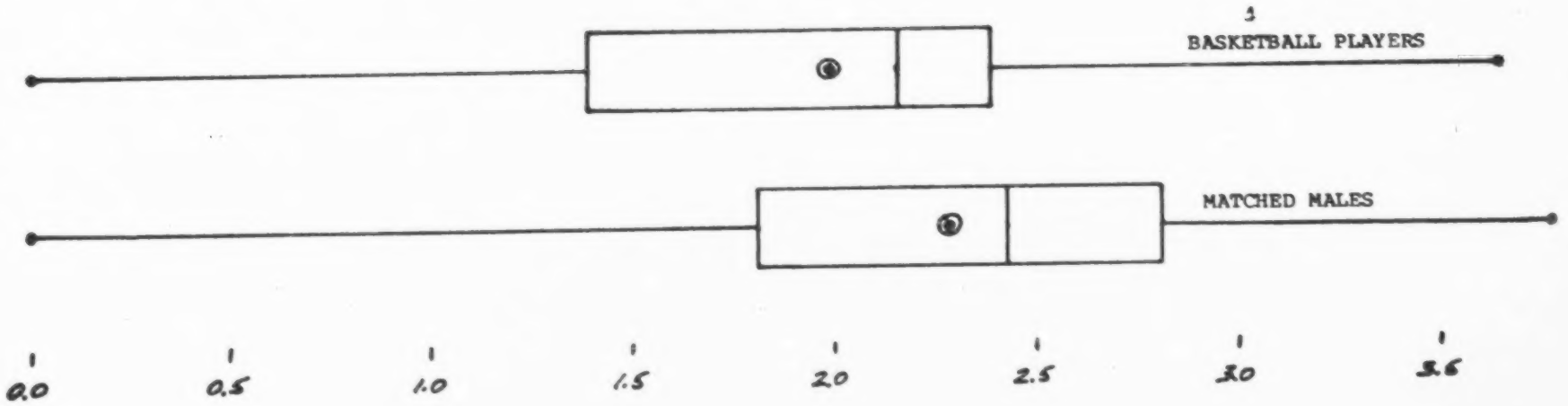


FIG. 3 CREDIT HOURS EARNED - BOX PLOTS

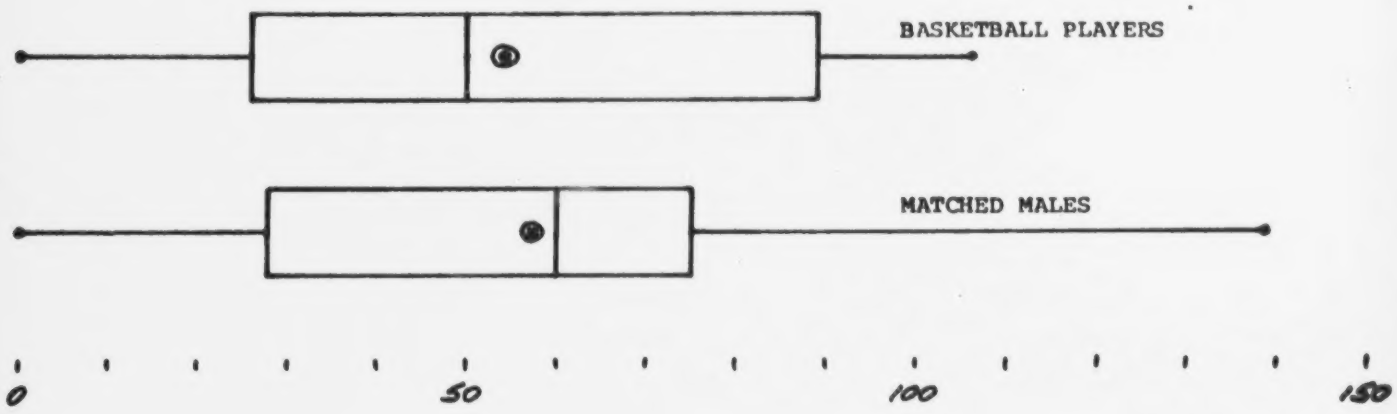


FIG. 4 TERMS ENROLLED - BOX PLOTS

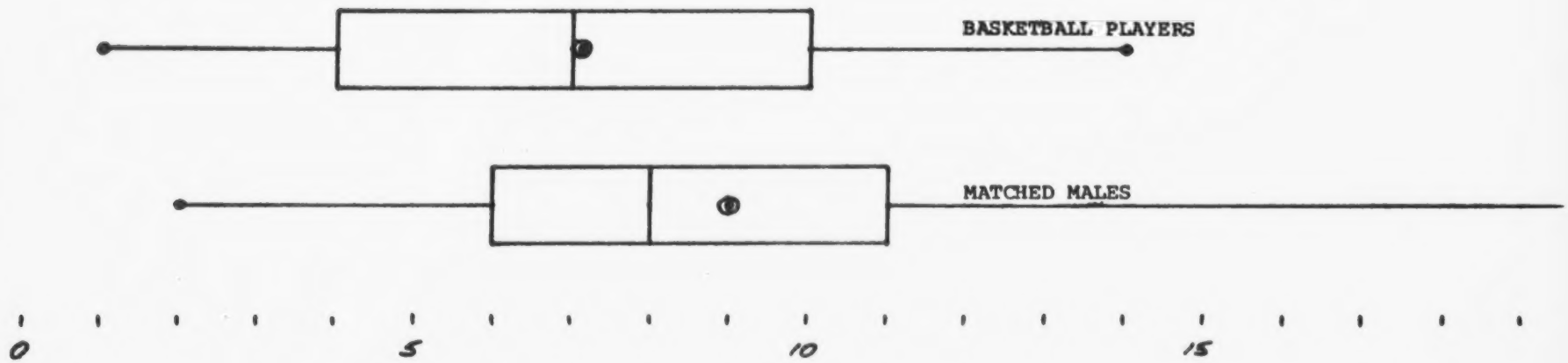


FIG. 5 D.E. COURSES

	D.E. COURSES TAKEN: 0	D.E. COURSES TAKEN: ≥1
BASKETBALL PLAYERS	21	30
MATCHED STUDENTS	25	26

FIG. 6 GRADUATES

	HAVE GRADUATED?: YES	HAVE GRADUATED?: NO
BASKETBALL PLAYERS	9	42
MATCHED STUDENTS	7	44

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CTC BASKETBALL PLAYERS

NAME (#)	DATE OF ENTRY	PROG	DAT VR/NA	NO. D.E. COURSES	NO. TERMS ENROLLED	GPA	CREDIT HR. EARNED	GRAD.
1A	1982	HR	10	4	2	0.00	0	N
2A	1981	EET	70	0	12	2.95	100	Y
3A	1982	HR	25	4	2	1.39	24	N
4A	1983	HR	20	4	2	1.38	13	N
5A	1982	BM	45	0	8	2.17	60	N
6A	1981	SM	15	1	12	2.36	92	N
7A	1982	HR	3	6	9	1.78	65	N
8A	1982	HR	20	4	10	2.00	75	N
9A	1983	BM	35	2	7	1.66	52	N
10A	1983	HR	30	0	11	2.36	95	N
11A	1981	BM	30	0	10	2.16	65	N
12A	1984	BM	W	0	3	0.84	19	N
13A	1981	HR	5	1	10	2.07	104	Y
14A	1981	AC	80	0	10	3.64	96	N
15A	1984	BM	40	0	10	2.80	92	Y
16A	1982	HR	10	0	9	1.85	68	N
17A	1984	SM	10	6	2	0.00	0	N
18A	1985	SM	5	1	4	2.22	41	N
19A	1983	BM	30	4	3	0.71	21	N
20A	1981	EET	80	0	11	2.37	95	Y
21A	1984	BM	45	0	10	2.00	99	N
22A	1984	LC	5	6	7	1.16	39	N
23A	1985	HR	15	4	1	0.00	0	N
24A	1983	LC	10	4	4	1.20	25	N
25A	1981	AC	20	0	11	2.42	86	N
26A	1984	BM	5	5	8	1.80	46	N
27A	1984	LC	15	4	5	2.09	27	N
28A	1984	EET	50	0	9	3.00	80	N
29A	1983	BM	25	1	3	1.00	26	N
30A	1984	ML	35	1	8	2.17	50	N
31A	1983	HR	50	3	5	2.61	38	N
32A	1985	BM	20	4	5	2.39	46	N
33A	1982	LO	40	0	7	2.04	55	N
34A	1985	HR	25	0	4	2.34	50	N
35A	1981	HR	5	4	6	1.68	29	N
36A	1982	BM	25	4	4	2.57	49	N
37A	1982	SM	15	3	11	2.17	65	N
38A	1981	HR	20	3	14	2.83	101	Y
39A	1985	SM	40	2	3	2.64	25	N
40A	1984	HR	10	6	8	2.26	46	N
41A	1984	EET	25	5	12	1.38	57	N
42A	1980	CET	25	0	12	2.37	106	Y
43A	1983	EET	45	0	3	2.18	28	N
44A	1985	ILMP	5	5	3	3.00	6	N
45A	1985	HR	3	4	5	1.22	21	N
46A	1983	CET	20	0	11	2.31	103	Y
47A	1983	HR	20	0	12	2.15	104	Y
48A	1985	HR	25	2	4	1.81	20	N
49A	1981	BM	85	0	5	3.61	38	N
50A	1980	HR	15	0	7	1.27	40	Y
51A	1981	SM	60	0	10	2.80	89	Y

MATCHED CTC STUDENTS TO BASKETBALL PLAYERS

NAME (#)	DATE OF ENTRY	PROGRAM	DAT VR/NA	NO. DE COURSES	NO. TERMS ENROLLED	GPA	CRED.HR. EARNED	GRAD.
1NA	1982	HR	10	4	10	2.57	70	N
2NA	1981	EET	70	0	10	2.56	60	N
3NA	1982	HR	20	1	14	1.41	70	N
4NA	1983	HR	25	11	6	2.56	16	N
5NA	1982	BM	45	0	3	2.38	26	N
6NA	1981	SM	10	1	20	2.33	55	N
7NA	1982	HR	5	4	6	1.00	10	N
8NA	1982	HR	15	3	6	1.81	28	N
9NA	1983	BM	35	5	10	1.80	29	N
10NA	1983	HR	30	0	9	2.48	95	Y
11NA	1981	BM	25	3	7	2.40	51	N
12NA	1984	BM	W	0	7	3.09	34	N
13NA	1981	HR	10	5	6	1.26	10	N
14NA	1981	EET	75	0	19	3.48	75	N
15NA	1984	BM	40	0	3	.9	9	N
16NA	1982	HR	10	6	8	1.41	70	N
17NA	1984	SM	15	3	11	1.89	92	N
18NA	1985	SM	10	0	9	2.81	64	N
19NA	1983	BM	30	0	15	2.72	66	N
20NA	1981	EET	75	0	19	3.30	139	Y
21NA	1984	BM	45	0	8	3.49	71	Y
22NA	1984	HR	10	6	9	2.17	52	N
23NA	1985	HR	15	0	8	2.06	64	N
24NA	1983	LC	10	1	8	2.44	77	N
25NA	1981	AC/CH	15	1	8	1.65	33	N
26NA	1984	LC	10	4	2	0.00	0	N
27NA	1984	LC	20	0	8	2.36	136	N
28NA	1984	EMET	55	0	12	2.71	92	Y
29NA	1983	EM	35	0	10	3.78	95	Y
30NA	1984	ML	40	0	7	2.98	49	N
31NA	1983	HR	50	0	10	3.20	71	N
32NA	1985	BM	20	0	2	1.81	16	N
33NA	1982	LO	40	0	13	2.65	106	Y
34NA	1985	HR	25	3	5	2.13	24	N
35NA	1981	HR	10	1	6	1.42	41	N
36NA	1982	BM	25	2	12	1.69	45	N
37NA	1985	SM	15	2	5	2.45	38	N
38NA	1981	HR	15	6	18	2.17	127	N
39NA	1985	SM	40	0	2	2.60	15	N
40NA	1984	BM	10	4	9	3.11	93	N
41NA	1984	CIM	30	0	16	1.98	108	N
42NA	1980	CET	30	0	9	2.49	79	Y
43NA	1983	EET	50	0	17	2.83	70	N
44NA	1985	SM	10	1	11	2.81	64	N
45NA	1985	LC	5	8	6	3.00	55	N
46NA	1983	CET	25	0	4	2.08	27	N
47NA	1983	HR	15	3	4	0.61	15	N
48NA	1985	HR	25	4	5	2.43	23	N
49NA	1981	BM	90	0	8	2.84	61	N
50NA	1980	HR	20	1	11	1.93	66	N
51NA	1981	SM	60	0	8	2.59	56	N

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